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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,888	11/18/2003	Nobuo Sasaki	SCEI 16.677A	3690

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EXAMINER

HARRISON, CHANTE E

ART UNIT PAPER NUMBER

2628

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/09/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/715,888

Applicant(s)

SASAKI ET AL.

Examiner

Chante Harrison

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-19, 23 and 24 is/are rejected.
- 7) ☒ Claim(s) 20-22 and 25-27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 8/16/06
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. This action is responsive to the following communication: Amendment filed on 10/3/06. This action is made FINAL.
2. Claims 11-27 are pending in this application. Claims 11 and 12 are independent claims. Claims 1-10 have been canceled. Claims 14-27 have been newly added.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 11-19, 23 and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Karl Wood, US 2002/0027559 A1, 3/2002.

As per independent claim 11, Wood discloses a preprocessing portion (Fig. 1 "14, 20 & 26") operably coupled to receive primitive parameters (i.e. receiving source images stored as polygonal model data, e.g. primitive surfaces) (pp. 2, Para 17 & 18), wherein the preprocessing portion produces pixel information from the primitive parameters based on the primitive parameters (pp. 2, Para 19 & 20); a pixel engine (Fig. 1 "28") operably coupled to the preprocessing portion (Fig. 1 "28 connected to "14-26" via bus "18") , wherein the pixel engine receives the pixel information (pp. 3, Para 24), and calculates intermediate data from the pixel information (i.e. calculate modulation) (pp. 3, Para 25-26; pp. 4, Para 33-34); and memory (Fig. 1 "41") operably coupled to the pixel engine (Fig. 1 "28" connected to "41"), wherein the memory stores the intermediate data (i.e. texture memory "41" stores modulation values, L', that are modified texel map

coordinate levels) (pp. 3, Para 27; pp. 4, Para 33-34), wherein the pixel engine reads the intermediate data from the memory (i.e. mapping hardware supplies the modulation values) (pp. 3, Para 25) and calculates a final data from the fed-back intermediate data (i.e. DPU "28" generates pixel coordinates, COL, from modulation values, MOD, fed back into the DPU) (pp. 3, Para 24 & 27). Wood inherently teaches an image generation circuit performing storage and feedback of intermediate data as he teaches an apparatus including a memory for receiving an offset value that corresponds to a stored texture map data at a level offset from an original texture map level where each offset map is retrieved and fed back to a component of the apparatus to generate final pixel values for display. Thus, each offset texture map level is stored as it corresponds to a range of stored original texture map levels, which may be recalled as required.

As per independent claim 12, Wood discloses a preprocessing block (Fig. 1 "14, 20 & 26") that receives primitive parameters (i.e. receiving source images stored as polygonal model data, e.g. primitive surfaces) (pp. 2, Para 17 & 18) and produces pixel information from the primitive parameters (pp. 2, Para 19 & 20); a pixel engine (Fig. 1 "28") operably coupled to the preprocessing block (Fig. 1 "28 connected to "14-26" via bus "18"), wherein the pixel engine generates pixel values from the pixel information (i.e. calculate modulation) (pp. 3, Para 25-26; pp. 4, Para 33-34); and a feedback path from an output portion of the pixel engine (Fig. 1; path "MOD" is fed back into DPU from paths "L, F, Z, V & U" output from DPU), wherein the feedback path allows results of operations performed by the pixel engine to be used in subsequent operations

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performed by the pixel engine (Fig. 1 "COL" ; i.e. DPU "28" as a result of performing operations using "L, F, Z, V & U" receives a return value, MOD, that is subsequently used to output values, COL). Wood inherently teaches an image generation circuit performing storage and feedback of intermediate data as he teaches an apparatus including a memory for receiving an offset value that corresponds to a stored texture map data at a level offset from an original texture map level where each offset map is retrieved and feedback to a component of the apparatus to generate final pixel values for display. Thus, each offset texture map level is stored as it corresponds to a range of stored original texture map levels, which may be recalled as required.

As per dependent claim 13, Wood discloses the feedback path includes buffering (Fig. 1 DPU supplied values "L, F, Z, V & U" are processed to correspond to a stored texture map level in memory "41") such that a plurality of pixels can be processed during each of a plurality of passes in a multipass operation (i.e. texture map data can be recalled as needed for processing and generation of image data) (pp. 2, Para 18), wherein each pass has associated information that is used to configure the image processing unit (i.e. processing, e.g. lighting calculations, depth and surface color modulation, may be performed on a per-primitive or per-vertex basis) (pp. 2, Para 20; pp. 3, Para 24; pp. 4, Para 33-34).

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As per dependent claim 14, Wood discloses the intermediate data is one of **texture data** and shape data (i.e. modulation pattern is the texture) (pp. 1, Para 2).

As per dependent claim 15, Wood discloses the primitive parameters includes at least one of **two-dimensional polygon vertex information**, z information, and brightness information (pp. 2, Para 18).

As per dependent claim 16, Wood discloses the pixel information includes at least one of **pixel coordinates**, a z value, a brightness, and texture coordinates (pp. 3, Para 24).

As per dependent claim 17, Wood discloses the pixel information is determined by linear interpolation (pp. 4, Para 35).

As per dependent claim 18, Wood discloses a two dimensional image is generated by texture mapping to three dimensional polygons (pp. 1, Para 6-7); an overall pattern is generated on said polygons by mapping of basic textures (pp. 1, Para 9); mapping of modulation textures by amplitude modulation is executed by amplitude modulation processing on patterns generated based on the mapping of said basic textures (pp. 3, Para 27; pp. 4, Para 34-35).

As per dependent claim 19, Wood discloses an amplitude is made smaller with increasing distance from the vicinity of a viewpoint (pp. 4, Para 34).

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As per dependent claim 23, the rationale as applied in the rejection of claim 18 applies herein.

As per dependent claim 24, the rationale as applied in the rejection of claim 19 applies herein.

3. Claims 20-22 and 25-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.



***Response to Arguments***

4. Applicant's arguments filed 10/3/06 have been fully considered but they are not persuasive.

Applicant argues (pp. 10, Para 2) Wood does not disclose intermediate data.

In response, Wood discloses intermediate data as he teaches generating modulation data from loaded primitive parameters (pp. 3, Para 25). Wood also teaches that a modulation value for each pixel location is fed into memory and may be modified within the DPU to further modify pixel values (pp. 3, Para 27). Therefore, Wood discloses intermediate data as he teaches generating modulation values that are stored and fed back into a processing unit to determine final pixel values.

Based upon the above rationale the claims do not patentably distinguish over the applied prior art.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chante Harrison whose telephone number is 571-272-7659. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on 571-272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Chante Harrison  
Examiner  
Art Unit 2628

Ch  
January 4, 2007



KEE M. TUNG  
SUPERVISORY PATENT EXAMINER